

IN THE CLAIMS:

- 1 1. (Currently Amended) A system for providing redundancy for telecommunication
2 switches (telecom switches) receiving control signal data from a control network and
3 bearer traffic data from a bearer traffic network, said system comprising:
4 a primary telecom switch, said primary telecom switch having a primary I/O
5 board for transmitting and receiving data, said primary I/O board having communicating
6 relationships through: i) a control signal connection; ii) a bearer traffic connection; and
7 iii) a primary redundancy connection, said primary telecom switch having a primary
8 processing board for processing said data; and
9 a secondary telecom switch, said secondary telecom switch having a secondary
10 I/O board for transmitting and receiving data, said secondary I/O board having communi-
11 cating relationships through: i) a control signal connection; and ii) a secondary redun-
12 dancy connection in communicating relationship with said primary redundancy connec-
13 tion, said secondary telecom switch having a secondary processing board for processing
14 said data, wherein said secondary telecom switch assumes the role of said primary tele-
15 com switch in the event that said primary processing board becomes unavailable, said
16 secondary telecom switch communicating with said bearer traffic network through said
17 redundancy connections and said primary I/O board.
- 1 2. (New) The system as in claim 1, wherein said telecom switches are converged serv-
2 ices platforms (CSPs).
- 1 3. (New) The system as in claim 1, wherein said bearer traffic network is a circuit-
2 switched public switched telephone network (PSTN).
- 1 4. (New) The system as in claim 1, wherein said bearer traffic network is a packet-
2 switched Internet Protocol (IP) network.

- 1 5. (New) The system as in claim 1, wherein said bearer traffic connections are a port
2 type selected from the group consisting of: T1, E1, J1, and DS3.
- 1 6. (New) The system as in claim 1, further comprising: a memory storing programming
2 to delineate port types of said bearer traffic connections.
- 1 7. (New) The system as in claim 1, wherein said redundancy connection comprises one
2 or more cables.
- 1 8. (New) The system as in claim 1, wherein said redundancy connection is keyed to pre-
2 vent improper engagement.
- 1 9. (New) The system as in claim 1, further comprising: a connection detect signal pro-
2 vided on said redundancy connection, which indicates the availability of connection be-
3 tween said primary and secondary telecom switches.
- 1 10. (New) The system as in claim 9, wherein said primary telecom switch asserts mas-
2 tership in the event said connection detect signal indicates an unavailable connection.
- 1 11. (New) The system as in claim 9, wherein said secondary telecom switch releases
2 mastership in the event said connection detect signal indicates an unavailable connection.
- 1 12. (New) The system as in claim 1, further comprising: a connection detect signal lo-
2 cated on said redundancy connection, wherein said redundancy connection comprises one
3 or more cables, and wherein said connection detect signal is provided on substantially all
4 of said one or more redundancy connection cables.

1 13. (New) The system as in claim 1, wherein said secondary telecom switch receives
2 bearer traffic data regardless of whether said primary telecom switch is available or un-
3 available.

1 14. (New) The system as in claim 1, further comprising: unique identifications (IDs) on
2 each of said primary and secondary processing and I/O boards.

1 15. (New) The system as in claim 14, wherein said IDs are used for system configura-
2 tion.

1 16. (New) The system as in claim 14, wherein said IDs are used for product verification.

1 17. (New) The system as in claim 14, wherein said IDs are used for licensing purposes.

1 18. (New) The system as in claim 1, further comprising: a mastership signal communi-
2 cated between said primary and secondary telecom switches.

1 19. (New) The system as in claim 18, wherein said secondary telecom switch asserts
2 mastership in the event that said mastership signal indicates that said primary telecom
3 switch is unavailable.

1 20. (New) The system as in claim 1, wherein said primary and secondary telecom
2 switches are configured to issue a request for mastership, check for adjacent masters, and,
3 if so, enter a pending state until releasing said request, and if not, assert mastership.

1 21. (New) The system as in claim 20, further comprising: an arbitration timer, said re-
2 questing switch waiting for said arbitration timer to expire prior to asserting mastership.

1 22. (New) The system as in claim 21, wherein said primary telecom switch has an arbi-
2 tration timer that is set at less time than an arbitration timer of said secondary telecom
3 switch.

1 23. (New) A method for providing redundancy for telecommunication switches (tele-
2 com switches) said method comprising the steps of:

3 communicating, at a primary and secondary telecom switch, control signal data
4 with a control network over primary and secondary control signal connections on a pri-
5 mary and secondary I/O board, respectively;

6 communicating, at said primary telecom switch, bearer traffic data with a bearer
7 traffic network over primary bearer traffic connections on said primary I/O board;

8 communicating, at said secondary telecom switch, bearer traffic data with said
9 bearer traffic network over a secondary redundancy connection on said secondary I/O
10 board in communicating relationship with a primary redundancy connection on said pri-
11 mary I/O board;

12 processing said control signal data and said bearer traffic data on a primary and
13 secondary processing board on said primary and secondary telecom switches, respec-
14 tively; and

15 in the event that said primary processing board becomes unavailable, assuming, at
16 said secondary telecom switch, the role of said primary telecom switch, said secondary
17 telecom switch communicating with said bearer traffic network through said redundancy
18 connections and said primary I/O board.

1 24. (New) The method as in claim 23, wherein said telecom switches are converged
2 services platforms (CSPs).

1 25. (New) The method as in claim 23, wherein said bearer traffic network is a circuit-
2 switched public switched telephone network (PSTN).

1 26. (New) The method as in claim 23, wherein said bearer traffic network is a packet-
2 switched Internet Protocol (IP) network.

1 27. (New) The method as in claim 23, wherein said bearer traffic connections are a port
2 type selected from the group consisting of: T1, E1, J1, and DS3.

1 28. (New) The method as in claim 23, further comprising the step of: delineating port
2 types of said bearer traffic connections with programming stored on a memory.

1 29. (New) The method as in claim 23, wherein said redundancy connection comprises
2 one or more cables.

1 30. (New) The method as in claim 23, wherein said redundancy connection is keyed to
2 prevent improper engagement.

1 31. (New) The method as in claim 23, further comprising the step of: communicating a
2 connection detect signal over said redundancy connection, which indicates the availabil-
3 ity of connection between said primary and secondary telecom switches.

1 32. (New) The method as in claim 31, further comprising the step of: asserting master-
2 ship at said primary telecom switch in the event said connection detect signal indicates an
3 unavailable connection.

- 1 33. (New) The method as in claim 31, further comprising the step of: releasing master-
2 ship at said secondary telecom switch in the event said connection detect signal indicates
3 an unavailable connection.
- 1 34. (New) The method as in claim 23, further comprising the step of: communicating a
2 connection detect signal over said redundancy connection, wherein said redundancy con-
3 nection comprises one or more cables, and wherein said connection detect signal is com-
4 municated over substantially all of said one or more redundancy connection cables.
- 1 35. (New) The method as in claim 23, further comprising the step of: receiving bearer
2 traffic data at said secondary telecom switch regardless of whether said primary telecom
3 switch is available or unavailable.
- 1 36. (New) The method as in claim 23, further comprising the step of: providing unique
2 identifications (IDs) on each of said primary and secondary processing and I/O boards.
- 1 37. (New) The method as in claim 36, further comprising the step of: using said IDs for
2 system configuration.
- 1 38. (New) The method as in claim 36, further comprising the step of: using said IDs for
2 product verification.
- 1 39. (New) The method as in claim 36, further comprising the step of: using said IDs for
2 licensing purposes.
- 1 40. (New) The method as in claim 23, further comprising the step of: communicating a
2 mastership signal between said primary and secondary telecom switches.

1 41. (New) The method as in claim 40, further comprising the step of: asserting master-
2 ship at said secondary telecom switch in the event that said mastership signal indicates
3 that said primary telecom switch is unavailable.

1 42. (New) The method as in claim 23, further comprising the steps of:
2 issuing a request for mastership;
3 checking for adjacent masters; and
4 if a master is found, entering a pending state until releasing said request, and if no
5 master is found, asserting mastership.

1 43. (New) The method as in claim 42, further comprising the step of: waiting for an ar-
2 bitration timer to expire prior to asserting mastership.

1 44. (New) The method as in claim 43, wherein said primary telecom switch has an arbi-
2 tration timer that is less time than an arbitration timer of said secondary telecom switch.

1 45. (New) A system for providing redundancy for telecommunication switches (telecom
2 switches) receiving control signal data from a control network and bearer traffic data
3 from a bearer traffic network, said system comprising:
4 means for communicating, at a primary and secondary telecom switch, control
5 signal data with a control network over primary and secondary control signal connections
6 on a primary and secondary I/O board, respectively;
7 means for communicating, at said primary telecom switch, bearer traffic data with
8 a bearer traffic network over primary bearer traffic connections on said primary I/O
9 board;
10 means for communicating, at said secondary telecom switch, bearer traffic data
11 with said bearer traffic network over a secondary redundancy connection on said secon-

12 dary I/O board in communicating relationship with a primary redundancy connection on
13 said primary I/O board;

14 means for processing said control signal data and said bearer traffic data on a pri-
15 mary and secondary processing board on said primary and secondary telecom switches,
16 respectively; and

17 in the event that said primary processing board becomes unavailable, means for
18 assuming, at said secondary telecom switch, the role of said primary telecom switch, said
19 secondary telecom switch communicating with said bearer traffic network through said
20 redundancy connections and said primary I/O board.